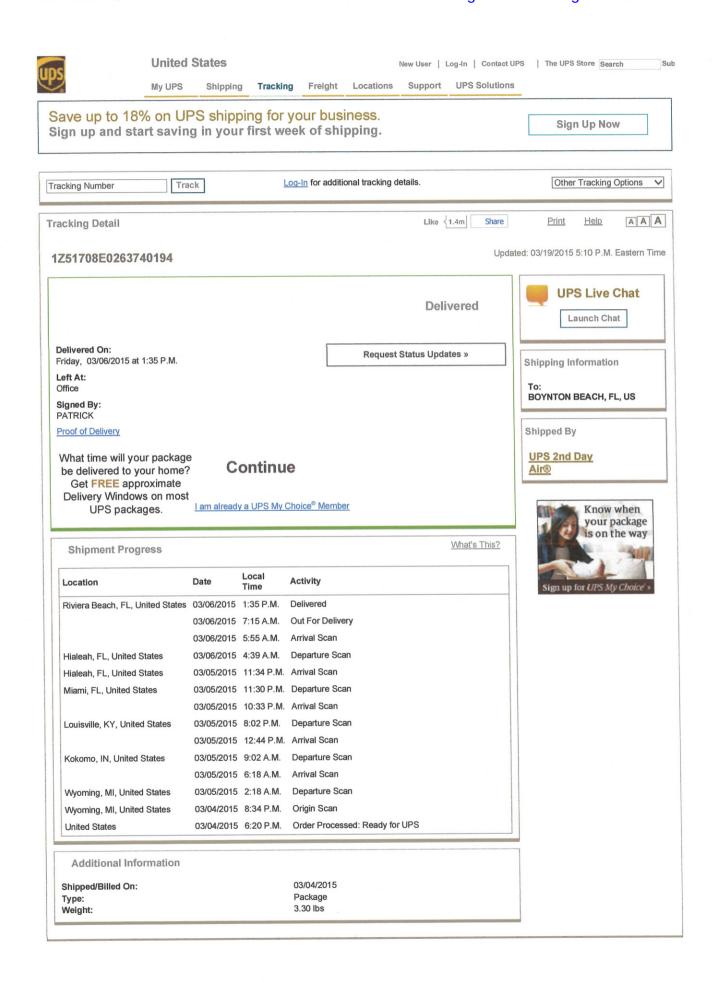
EXHBIT

D





SUPPLEMENTAL DECLARATION OF PATRICK PAIGE

I, PATRICK PAIGE, DO HEREBY DECLARE:

- 1. I am over the age of eighteen (18) and otherwise competent to make this declaration. The facts stated in this declaration are based upon my personal knowledge.
- I was a police officer from 1989 until 2011 for the Palm Beach County Sherriff's
 Department. From 2000-2011, I was a detective in the computer crimes unit.
- 3. As a detective in the computer crimes unit, I investigated internet child pornography and computer crime cases.
 - 4. I have conducted forensic computer examinations for:
 - (a) Broward County Sheriff's Office (BSO);
 - (b) Federal Bureau of Investigation (FBI);
 - (c) U.S. Customs and Border Protection (CBP);
 - (d) Florida Department of Law Enforcement (FDLE);
 - (e) U.S. Secret Service;
 - (f) Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF); and
 - (g) Various municipalities in the jurisdiction of Palm Beach County.
- I was assigned to a police unit working in conjunction with TLO Corp., which is a private company.
- .6. When I worked with TLO Corp., I supervised the other detectives assigned to the unit, which consisted of six online investigators and two computer forensic examiners.
- 7. With regard to my experience investigating child pornography cases, I supervised police officers whose responsibility it was to establish a successful TCP/IP connection with

persons who were sending pornographic images of children or other illegal content over the Internet using peer-to-peer file sharing programs.

- 8. I have taken over 400 hours of courses designed to teach people how to investigate computers.
- Also, while working from 2003-2011 for Guidance Software, the makers of EnCase, I have taught over 375 hours of courses in computer forensics ranging from beginner to advanced levels.
- I have had students in my courses from various government branches, including:(a) sheriff's offices; (b) FBI agents; (c) ATF agents; (d) agents from the Central IntelligenceAgency, and (e) individuals from other branches of government and the private sector.
- 11. After leaving the Palm Beach County Sherriff's office, I founded Computer Forensics, LLC, where I am currently employed.
 - 12. I have received the following awards and commendations:
 - (a) 1991 Deputy of the Year, awarded by the 100 Men's Club of Boca Raton & Rotary Club.
 - (b) 1997 Deputy of the Month for June.
 - (c) 2001 Detective of the Month for October.
 - (d) 2002 Outstanding Law Enforcement Officer of the Year, awarded by the United States Justice Department for work in the U.S. vs. Jerrold Levy case.
 - (e) 2003 U.S. Customs Service Unit Commendation Citation Award for computer forensic work in Operation Hamlet. Operation Hamlet was one of the largest rings in the history of U.S. Customs of individuals who were molesting their own children, and transmitting the images and video via the Internet.
 - (f) 2005 Detective of the Month for December.

- (g) 2007 Outstanding Law Enforcement Officer of the Year, awarded by the United States Justice Department for work in the *U.S. vs. Jimmy Oliver* case.
- (h) 2008 Letter of Commendation issued by the FBI for outstanding computer forensic work in the *U.S. vs. Frank Grasso* case.
- 13. I have testified as a fact and expert witness on numerous occasions in the field of computer forensics in both trial-level and appellate proceedings before state, federal, and military courts in Florida, California, Indiana, New Jersey, New York, and Pennsylvania.
- 14. No court has ever refused to accept my testimony on the basis that I was not an expert in computer forensics. My skill set and my reputation are my most important assets in my current position with Computer Forensics, LLC.
- 15. The offenders' IP addresses, as well as the dates and times of the illegal transmission were recorded.
- 16. An officer would then request that the assistant state attorney subpoena the corresponding ISPs for the purpose of identifying the subscribers that were transmitting the illegal content.
- 17. In these cases, the subscribers were not notified by the ISPs that their identity was being subpoenaed because they could have deleted the images and destroyed the data.
- 18. After receiving the subscribers' identities, we would prepare a search warrant that would authorize us to enter the subscribers' dwelling and seize all of their computer devices.
- 19. I was directly involved in approximately 200 search warrants either by way of managing the process or performing it personally while at the Computer Crimes Unit.
- 20. I can recall only one instance in all the times that we executed a search warrant and seized computers where we did not find the items listed in the search warrant at the dwelling identified in the search warrant.

- 21. In that one instance, the Wi-Fi connection was not password protected, and the offender was a neighbor behind the residence.
 - 22. I never came across a Wi-Fi hacker situation.
- 23. In my opinion, a child pornographer has a greater incentive to hack someone's Wi-Fi connection than a BitTorrent user because transmission of child pornography is a very serious crime with heavy criminal penalties, and many offenders can face life sentences if convicted.
 - 24. I tested IPP International U.G.'s ("IPP") IP detection process.
 - 25. To do so, I downloaded four public domain movies from the national archive.
- 26. I then encoded text into the videos, so that I would know whether someone that downloaded that particular movie downloaded the version of the movie that I created.
- 27. I then rented four virtual servers, each of which was connected to the Internet and used a unique IP addresses.
- 28. I then configured the servers so that all of them were running Windows 2008 server edition, and I put a different BitTorrent client onto each server.
 - 29. A BitTorrent "client" is software that enables the BitTorrent protocol to work.
- 30. After installing the BitTorrent clients, I also installed Wireshark onto each server. "Wireshark" is a program that captures network traffic and creates PCAPs, just as TCP Dump, which IPP uses, does. A PCAP is like a video recording of all the incoming and outgoing transactions of a computer.
- 31. After installing Wireshark onto each of the servers, I transferred the movies from my local computer to the servers.

- 32. I then used the BitTorrent clients on each of the servers to make .torrent files. I uploaded these .torrent files onto various torrent websites.
- 33. I then informed IPP of the movie names. Thereafter, IPP sent me screen captures of the movies I had seeded.
- 34. The screen captures sent by IPP had my codes on them; thus, I knew that IPP had caught the movies I had seeded.
- 35. IPP also sent me additional data identifying the IP Address used by each of the four servers, and sent me PCAPs.
- 36. I reviewed IPP's PCAPs vis-à-vis the PCAP log files created by each of my test servers, and determined that IPP's PCAPs match my PCAPs. This could not have happened unless IPP's server was connected to the test server because the transactions would not match.
- 37. From this test, I concluded that IPP's software worked, and had a subpoena been issued for my IP addresses, it would have revealed my identity.
- 38. With regards to this case, I examined Defendant's hard drive images for any evidence of: (a) use of the BitTorrent protocol; (b) infringement of the copyrighted "X-Art" works owned by Plaintiff, Malibu Media, LLC ("Malibu Media"); (c) spoliation of evidence; and (d) suppression of evidence.
- 39. On December 26, 2014, I received a package from Tim Kiefer of D4 Data in Rochester, New York. Mr. Kiefer's package contained one Western Digital hard drive. The Western Digital Hard Drive contained two (2) EnCase images of computer devices listed as belonging to Defendant Jesse Raleigh ("Defendant"). See Paige Report, Exhibit A, p. 1. One (1) of the EnCase images was of Defendant's MacBook C02HW056DV31 ("MacBook Laptop No. 1") and the other Encase image was of Defendant's MacBook 340269NBATM ("MacBook

Laptop No. 2"). Lastly, the Western Digital Hard Drive contained two (2) Cellebrite iPad extractions.

- 40. Prior to examination, I was provided with a list of: (a) the torrent filenames for Plaintiff's copyrighted works infringed; and (b) the torrent filenames of numerous third party works that IPP detected were distributed through BitTorrent by a computer using Defendant's IP address ("Additional Evidence").
- 41. I conducted my examination of Defendant's computer devices using the forensic software EnCase Version 6 & 7 by Guidance Software ("EnCase") and Internet Evidence Finder by Magnet Forensics ("IEF").
- 42. The results of my examination are set forth in the Report of Findings ("Paige Report") attached hereto as Exhibit "A." I also exported supporting documentation contained in a .zip folder titled "Raleigh Final Report Case Files" attached hereto as Exhibit "B"
- 43. In sum, within Defendant's computer devices I discovered evidence which demonstrates: (a) BitTorrent use; and (b) the existence of other computer devices that have not been produced to me for examination. *See* Paige Report, Exhibit A.

DEFENDANT'S MACBOOK LAPTOP NO. 1

<u>DEFENDANT'S MACBOOK LAPTOP NO. 1 CONTAINS EVIDENCE OF BITTORRENT USE</u>

44. Using EnCase software a keyword search for "torrent" was conducted. See Paige Report, Exhibit A, p. 4. Upon examining the search hits I located a text file named "David_Cesolini_Chats.txt" which contained a discussion about torrents. See Paige Report, Exhibit A, p. 4; See Exhibit B. Further examination revealed that this chat and other files contained in a folder "Chinga_La_Migra_Dos" may be related to a hacking event that took place in 2011. See Paige Report, Exhibit A, p. 4. This computer contains the sensitive files released by

hacker(s) which contain individuals' personal information including social security, driver's license numbers, account passwords etc. *See* Paige Report, Exhibit A, p. 4. Because of the sensitive nature of this information, my report contains redacted screenshots to preserve the confidential information of listed third parties. *Id*.

- 45. I also discovered several other Adium, skype, and iMessage chats about BitTorrent, and torrents. See Paige Report, Exhibit A, p. 3; See Exhibit B.
- 46. I was also able to locate an "NFO" file. *Id.* NFO files are commonly associated with pirated files and are often included with the infringed files(s). *See* Paige Report, Exhibit A, p. 3
- 47. In my examination of Defendant's Macbook Laptop No. 1, I located two (2) Parallels Virtual Machines. *See* Paige Report, Exhibit A, p. 5. One was named Windows 7-0.hdd ("Windows 7-0") and the other was named Windows XP.hdd ("Windows XP"). *See* Paige Report, Exhibit A, p. 5; *See* Exhibit B.
- 48. A virtual machine is an emulation of a computer system which imitates the structure and functions of a real computer system. Virtual machines are created and operated using virtualization software. Simply put, these virtual machines needed to be examined independently, because they emulate an entire independent computer system.
- 49. Parallels Desktop software is hardware virtualization software for the MAC operating system. Parallels software allows the user to create and run virtual operating systems including Windows based operating systems on a MAC computer.
- 50. In this case the user was utilizing a Microsoft Windows XP virtual machine via the Parallels Software. See Paige Report, Exhibit A, p. 5. Using EnCase software I copied out the "Windows XP" virtual along with the companion configuration files to my local forensics

machine. *Id.* Using software "VMware vCenter Converter Standalone Client" I converted the image to a VMware virtual machine and loaded the image into IEF forensic software for processing and examination. *See* Paige Report, Exhibit A, p. 5. The same process was followed for the "Windows 7" Parallels virtual machine however the configurations appeared to be corrupt. *Id.* And, I was therefore unable to examine the "Windows 7" virtual machine.

51. Using IEF and EnCase software I located a BitTorrent client titled "uTorrent" on the "Windows XP" virtual machine and a LNK file in the start menu for the computer user "Jesse". See Paige Report, Exhibit A, p. 6.

DEFENDANT'S MACBOOK LAPTOP NO. 1 CONTAINS FOLDERS EVIDENCING THE EXISTENCE OF UNDISCLOSED STORAGE ON A LOCAL NETWORK AND CLOUD STORAGE SERVICE

- 52. Using EnCase and IEF software I searched for possible undisclosed network storage locations. *See* Paige Report, Exhibit A, p. 6.
- 53. In searching for possible undisclosed network storage locations, I discovered the "NetHood" folder. *Id.* The NetHood folder stores the path to the folder containing shortcuts to servers that the user has added to My Network Places. This indicates additional file storage somewhere on a local network. *Id.* IEF discovered locations on the network including "PSF" where folders are being accessed including "\psf\Parallels Desktop" 7&8. *Id.* The Parallels Desktop folder 7&8 evinces the possible existence of other virtual machines or the storage of other various versions of Parallels software. *Id.* I exported IEF's complete list of Network Share Information and Shellbags to the final report case files. *See* Exhibit B.
- 54. Using IEF, I also located hundreds of "Cloud Services" related URLs (Web Addresses) relating to sites like Dropbox and Google Drive. *See* Paige Report, Exhibit A, p. 3. *See* Exhibit B.

55. The contents of these Cloud services have not been produced to me for examination.

DEFENDANT'S MACBOOK LAPTOP NO. 2

DEFENDANT'S MACBOOK LAPTOP NO. 2 CONTAINS EVIDENCE OF BITTORRENT USE

- 56. Using IEF I discovered evidence of BitTorrent use on Defendant's MacBook Laptop No. 2. Specifically, I discovered:
 - a. Several BitTorrent related website URLs pertaining to the website "The Pirate Bay." See Paige Report, Exhibit A, p. 8; See Exhibit B. The Pirate Bay is an online website which enables piracy of copyrighted works through its extensive index of torrent files:
 - The installation of a BitTorrent client titled "uTorrent" See Paige Report, Exhibit A,
 p. 8; and
 - c. Numerous music media files which have embedded metadata referencing "www.torrentazos.com" which suggests file origin from this website. See Paige Report, Exhibit A, p. 8. The website "www.torrentazos.com" contains illegally obtained computer media files.

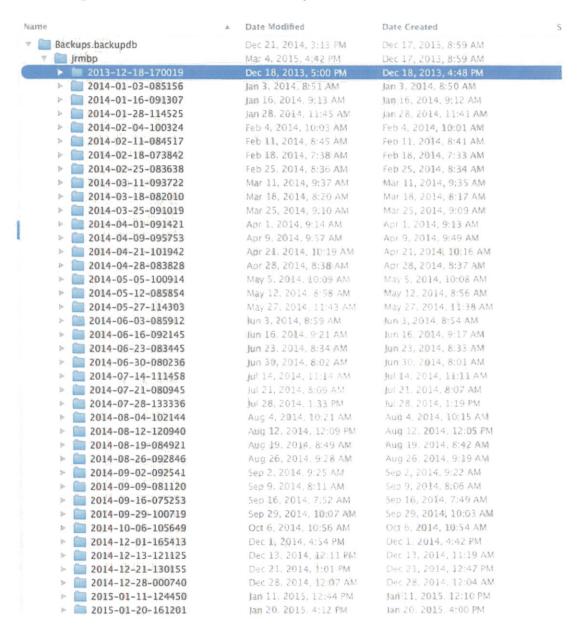
UNDISCLOSED AND UNPRODUCED STORAGE DEVICES

DEFENDANT'S MACBOOK LAPTOP NO. 1 AND 2 CONTAIN SYSTEM LOG FILES EVIDENCING THE EXISTENCE OF UNDISCLOSED STORAGE DEVICES

57. Using EnCase software I conducted a keyword search of the "system.log" files located on both Defendants' MacBook Laptop No. 1 and No. 2 using the keyword "USBMSC". See Paige Report, Exhibit A, p. 10; See Exhibit B. I was able to locate and identify USB devices that were plugged into the two computer devices. Id.

- 58. As outlined in my report, I am able to conclude that a Western Digital MyBook Essentials External Hard Drive ("Western Digital Hard Drive") serial number "574D415A4139303734343136" was last accessed on December 2, 2014. See Paige Report, Exhibit A, p. 10; See Exhibit B.
- 59. Using EnCase software I conducted a keyword search for serial number "574D415A4139303734343136" pertaining to the Western Digital Hard Drive. *Id.* The results of this search prove that this device was plugged into both the MacBook Laptop No. 1 and MacBook Laptop No. 2 numerous times. *Id.*
- 60. The Western Digital Hard Drive was plugged into Defendant's MacBook Laptop No. 1 between July 10, 2013 and December 2, 2014. See Paige Report, Exhibit A, p. 11; See Exhibit B.
- 61. The Western Digital Hard Drive was plugged into Defendant's MacBook Laptop No. 2 between October 13, 2011 and February 17, 2014. *Id*.
- 62. The foregoing proves the existence of a Western Digital Hard Drive and its consistent use in connection with Defendant's MacBook Laptop No. 1 and MacBook Laptop No. 2 for the past five years.
- 63. As of February 13, 2015, the Western Digital Hard Drive had not been produced to me for examination.
- 64. As outlined in my report, I was also able to locate a last know access date of October 15, 2014 for a Toshiba External Hard Drive. *See* Paige Report, Exhibit A, p. 13.
 - 65. The Toshiba External Hard Drive has not been produced to me for examination.

75. The Western Digital Hard Drive contained 72 backup folders dated from December 18, 2013 to March 4, 2015. The below screen capture shows the backups in 2014 occurred on average 3-4 times a month. *See* Exhibit C, p. 2.



- 72. Defendant provided me with the password "dontbeafuckingprickman15423" which successfully unlocked the volume. *See* Exhibit C, p. 2.
- 73. Using BlackLight forensic software I processed the contents of the drive and was able to view the folder structure. The folder structure revealed the drive was used as a "backup drive" through the use of software titled "Time Machine". *Id*.
- 74. Time Machine is backup software that creates backups of files which can be restored at a later date. Time Machine keeps all the backups stored until the disk (on which the backup is stored) becomes full. Once the disk is full, the oldest backups are deleted. See Exhibit C, p. 3.

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DEFENDANT'S WESTERN DIGITAL HARD DRIVE

AN EXTENSIVE AMOUNT OF BACKUP ACTIVITY OCCURRED SHORTLY BEFORE PRODUCTION OF DEFENDANT'S WESTERN DIGITAL HARD DRIVE

- 66. On March 6, 2015, I received a UPS package with the tracking number 1Z51708E0263740194 from Defendant, Jesse Raleigh. The package contained a power supply cord and one Western Digital external 2TB My Book hard disk drive, serial number 574D415A4139303734343136 ("Western Digital Hard Drive"). See Paige Report on Western Digital Hard Drive, attached hereto as Exhibit C.
- 67. Based on the matching serial numbers, I concluded that this was the exact Western Digital Hard Drive discussed in paragraphs 58-63 of this declaration, which was not initially produced to me for examination.
- 68. To create a forensically sound image of the Western Digital Hard Drive, I connected it to a Tableau TD3 forensic device. *See* Exhibit C, p. 2.
- 69. The image files were then loaded into EnCase forensic software which verified that the files contained no errors. *Id*.
- 70. Once loaded into EnCase, I discovered that the hard drive contained a FileVault2 encrypted volume. In order to read the encrypted volume I connected the Western Digital Hard Drive back to the Tableau TD3 device and made a RAW image of the Western Digital Hard Drive onto a 3TB wiped hard drive ("Cloned Hard Drive"). This Cloned Hard Drive was then connected to a Tableau T35u USB3 write blocker which was then connected to my MacBook Pro forensic computer. *Id*.
- 71. Once I connected the Cloned Hard Drive, I was prompted to enter the password for the encrypted volume titled "JR Backup". *Id*.

76. This trend continued until March 2015 when a total of twenty-four (24) backups were performed that month. Of these twenty-four (24) backups, sixteen (16) occurred the same day the Western Digital Hard Drive was shipped to my office for analysis (March 4, 2015). *See* Exhibit C, p. 2.

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Z015-02-03-181234
                               Feb 3, 2015, 5:12 PM
                                                          Feb 3, 2015, 5:50 PM
2015-02-04-004928
                               Feb 4, 2015, 12:49 AM
                                                          Feb 4, 2015, 12:47 AM
2015-02-05-000003
                               Feb 5, 2015, 12:00 AM
                                                          Feb 4, 2015, 11:59 PM
2015-02-18-163722
                               Feb 18, 2015, 4:37 PM
                                                          Feb 18, 2015, 3:09 PM
                               Feb 19, 2015, 12:00 AM
2015-02-19-000006
                                                          Feb 18, 2015, 11:58 PM
  2015-02-20-005805
                               Feb 20, 2015, 12:58 AM
                                                          Feb 20, 2015, 12:53 AM
     2015-02-21-003520
                               Feb 21, 2015, 12:35 AM
                                                          Feb 21, 2015, 12:33 AM
     2015-02-22-113409
                               Feb 22, 2015, 11:34 AM
                                                          Feb 22, 2015, 11:29 AM
     2015-03-02-095822
                               Mar 2, 2015, 9:58 AM
                                                          Mar 2, 2015, 8:05 AM
  2015-03-03-005515
                               Mar 3, 2015, 12:55 AM
                                                          Mar 3, 2015, 12:53 AM
     2015-03-03-164809
                               Mar 3, 2015, 4:48 PM
                                                          Mar 3, 2015, 4:39 PM
     2015-03-03-175825
                               Mar 3, 2015, 5:58 PM
                                                          Mar 3, 2015, 5:52 PM
     2015-03-03-190622
                               Mai 3, 2015, 7:06 PM
                                                          Mar 3, 2015, 7:00 PM
  2015-03-03-204904
                                Mar 3, 2015, 8:49 PM
                                                          Mar 3. 2015. 8:10 PM
     2015-03-03-215558
                                Mar 3, 2015, 9:55 PM
                                                          Mar 3, 2015, 9:51 PM
     2015-03-03-225949
                                Mar 3, 2015; 10:59 PM
                                                          Mar 3, 2015, 10:58 PM
     2015-03-04-000209
                                Mar 4, 2015, 12:02 AM
                                                          Mar 4, 2015, 12:01 AM
  2015-03-04-010526
                                Mar 4, 2015, 1:05 AM
                                                          Mar 4, 2015, 1:03 AM
     2015-03-04-020806
                                Mar 4, 2015, 2:08 AM
                                                          Mar 4, 2015, 2:06 AM
     2015-03-04-031102
                                Mar 4, 2015, 3:11 AM
                                                          Mar 4, 2015, 3:09 AM
  2015-03-04-041437
                                Mar 4, 2015, 4:14 AM
                                                          Mar 4, 2015, 4:12 AM
  2015-03-04-051809
                                Mar 4, 2015, 5:18 AM
                                                          Mar 4, 2015, 5:16 AM
      2015-03-04-062030
                                Mar 4, 2015, 6:20 AM
                                                          Mar 4, 2015, 6:19 AM
   2015-03-04-072629
                                Mar 4, 2015, 7:26 AM
                                                          Mar 4, 2015, 7:22 AM
  2015-03-04-083827
                                Mar 4, 2015, 8:38 AM
                                                          Mar 4, 2015, 8:28 AM
   2015-03-04-094651
                                Mar 4, 2015, 9:46 AM
                                                          Mar 4, 2015, 9:41 AM
      2015-03-04-105101
                                Mar 4, 2015, 10:51 AM
                                                          Mar 4, 2015, 10:48 AM
  2015-03-04-115730
                                Mar 4, 2015, 11:57 AM
                                                          Mar 4, 2015, 11:53 AM
  2015-03-04-130501
                                Mar 4, 2015, 1:05 PM
                                                          Mar 4, 2015, 1:00 PM
  2015-03-04-141504
                                Mar 4, 2015, 2:15 PM
                                                          Mar 4, 2015, 2:07 PM
      2015-03-04-152329
                                Mar 4, 2015, 3:23 PM
                                                           Mar 4, 2015, 3:17 PM
  2015-03-04-164028
                                Mar 4, 2015, 4:40 PM
                                                           Mar 4, 2015, 4:24 PM
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77. In fact, between March 3, 2015 at 4:39 PM and March 4, 2015 at 4:44 PM, Defendant's backed up his computer every single hour.

- 78. According to UPS records, on March 4, 2015 at 6:20 PM, Defendant shipped his hard drive. See UPS Tracking Records, attached hereto as Exhibit D.
- 79. During my search of this hard drive, I also discovered various BitTorrent files. See Exhibit C, p. 4-18.
- 80. I am paid on an hourly basis by Malibu Media, LLC, at the rate of \$325.00 per hour for pre-trial investigative work, although the fee increases if I am required to testify at trial.

FURTHER DECLARANT SAYETH NAUGHT.

DECLARATION

PURSUANT TO 28 U.S.C. § 1746, I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on this 20th day of March, 2015.

PATRICK PAIGE